CLAIM AMENDMENTS

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Previously Presented) A method of monitoring the operation of at least one microcontroller unit that is associated with a system, the method comprising:

associating at least one non-volatile memory area with the microcontroller unit, wherein the memory area can be read from and written to by the microcontroller unit; and

storing at least one set of statistics relating to the operation of the microcontroller unit, including at least a set of fault statistics for the microcontroller, by means of the non-volatile memory area.

2. (Previously Presented) A method as claimed in claim 1,

wherein the memory area is permanently supplied by at least one battery unit.

3. (Previously Presented) A method as claimed in claim 1 or 2,

wherein in relation to the operation of the microcontroller unit a distinction can be made between different reset events, and these different reset events can be made accessible to the microcontroller unit.

4. (Currently Amended) A method as claimed in any of claims 1 to 2, further comprising:

permitting the non-volatile memory area to be read from at any time; and

permitting the non-volatile memory area to be_written to only while the system is starting.

5. (Previously Presented) A base chip for monitoring the operation of at least one microcontroller unit, including at least one non-volatile memory area that can be read from and written to by the microcontroller unit, and by means of which at least one set of fault statistics relating to operation of the microcontroller unit, can be produced.

6. (Previously Presented) A base chip as claimed in claim 5, including at least one information unit that is provided to allow for different reset events, at least one reset unit for resetting the microcontroller unit, which reset unit is connected to the

microcontroller unit, and at least one supply unit that is connected to the microcontroller unit.

7. (Previously Presented) A base chip as claimed in claim 6,

      wherein the memory area and the supply unit are permanently supplied with power from at least one battery unit, and the microcontroller unit has at least one temporary energy supply provided to it via the supply unit.

8. (Currently Amended) A base chip as claimed in any of claims 6 to 7,

      wherein the memory area and the information unit have inserted in front of them at least one interface unit for ~~the~~ exchange of data with the microcontroller unit.

9. (Previously Presented) A system including at least one microcontroller unit intended for at least one application and at least one base chip as claimed in any of claims 5 to 7.

10. (Canceled)

11. (Previously Presented) The method of claim 1,

wherein the fault statistics include statistics on a plurality of different types of reset events.

12. (Previously Presented) The method of claim 11, further comprising:

comparing a number of at least one type of reset event to a threshold; and

when the number of the at least one type of reset event is greater than the threshold, operating the microcontroller unit in a low-energy mode.

13. (Previously Presented) The base chip of claim 5,

wherein the at least one non-volatile memory area comprises a random access memory.

14. (Previously Presented) The base chip of claim 5,

wherein the fault statistics include statistics on a plurality of different types of reset events.

15. (Previously Presented) The base chip of claim 14,

wherein the base chip is further adapted to compare a number of at least one type of reset event to a threshold, and when the number of the at least one type of

reset event is greater than the threshold, operating the microcontroller unit in a

low-energy mode.

16. (Currently Amended) The base chip of claim 5,

wherein the base chip permits the non-volatile memory area to be read from

at any time, and permits the non-volatile memory are to <u>be</u> written only while the

system is starting.